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Base Prices for Long-Term Farm Budgets in South Dakota

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I. PRICES AND FARM MANAGEMENT

Good production planning takes into account the factors of supply, demand (market price), and the cost of production. Specific planning for future production periods is most effectively done by means of budgets. Production planning should not, however, be confined to the production period just ahead. This is planning in the short-run only. A good farm manager will want to make production plans for several years ahead or perhaps for as many as five or ten years ahead.

This type of planning is essential whenever major changes in the farm business are undertaken such as shifting from a general type of farming to specialization in dairy farming or in shifting from cash grain farming to beef cattle farming and in making any major capital expenditure. More over, planning is essential in determining the economic feasibility of various farm practices, such as, determining profitable rates of fertilizer application or amounts of grasses and legumes to grow in rotations in developing soil building programs.

Still another kind of long-run planning involves planning public programs to help farmers to prevent soil deterioration or erosion, to develop soils by irrigation or drainage, and to prevent flood damage. Public programs for farmers must take into account the factors of supply, demand (market price), and the cost of production in the short - as well as the long-run if they are to be rational and economically sound.

In planning for the long-run, the critical question is: Assuming normal production, what will be the relationship between agricultural commodity prices and the costs of production? The relationship between prices and the cost of producing agricultural commodities at the present

time will not necessarily be a good guide to the relationship in the future for it may be more or less favorable in the future. In fact, any set of price-cost data used in making production plans for the future may prove to be inaccurate. However, price-cost data which take into account such factors as population growth, size of the labor force, employment conditions, business activity, technological progress, etc., represent a carefully calculated estimate of prices and costs that are likely to prevail in the future.

The relationship between prices and between the cost of production and prices is of greater importance in choosing between alternative production plans than is the level of prices and costs. This is true because the relationship between the cost of production and the price received determines net returns regardless of price level. The relationship between prices is indicative of the relative demand for various kinds of farm produce. Ordinarily, the production plan a farmer will want to put into operation is the one which will yield the largest net returns and at the same time maintain or increase productivity of land, labor, and capital investments. This means that a farmer will produce those farm commodities which are in greatest demand (or bring the highest price) with the greatest possible efficiency (or least cost.)

Farmers or business men who are the most successful are those who anticipate with some degree of accuracy the consumption demands of our growing population; who plan their production or merchandising programs to meet these consumption demands; and who produce or operate efficiently. The economist's role in this situation is: (1) to help farmers and business men to anticipate demand and what probable prices

and costs will prevail in the future; (2) to help farmers and business men to analyze the complex problems of production; and (3) to provide information that will lead to efficient use of resources and maximum use of products. The price data presented in this pamphlet is a step in this direction but it does not provide answers to any specific production problems.

A. Purpose of This Pamphlet

This pamphlet presents projected prices for agricultural commodities and specified unit cost factors in agricultural production adapted to South Dakota agricultural conditions. These price and cost data are based on specific assumptions concerning population growth, size of the labor force, degree of employment, volume of business, technological progress, price levels, and price relationships. Data relating to these assumptions are given in Table 1.

THESE PROJECTED PRICE AND COST DATA REPRESENT THE LEVEL OF PRICES AND COSTS AND THE PRICE-COST RELATIONSHIPS WHICH MAY BE EXPECTED IF THE ASSUMED CONDITIONS UPON WHICH THEY ARE BASED MATERIALIZE. THESE PROJECTED PRICES AND COSTS ARE NOT FORECASTS OF FUTURE PRICES AND COSTS NOR DO THEY REPRESENT PRICES AND COSTS FOR ANY PARTICULAR YEAR OR PRODUCTION PERIOD. It should also be stressed that these projected prices do not take into account large changes in the supply of or demand for these agricultural commodities. Several examples of developments which might result in changes in supply or demand and subsequent changes in price levels or price relationships are: (1) extensive irrigation developments resulting in large increases in the supply of agricultural commodities adaptable to production under irrigated conditions, such as sugar beets, alfalfa, edible beans, etc.; (2) the development of a new wheat variety resulting in substantial increases in the average per acre

yield of wheat; (3) a drastic reduction or the complete elimination of the "protective tariff" on wool; or (4) the development of synthetic fibers with the qualities of wool which could be produced at a lower cost and substituted for wool.

These price and cost data were intended for research purposes in determining costs and benefits under irrigation in South Dakota. They may be used by farmers and others in South Dakota desiring a consistent body of farm price and cost data for developing farm plans.

B. Source of Data and Procedure in Preparing Price and Cost Data

Long-term projected prices for agricultural commodities were prepared for each state by the Bureau of Agricultural Economics, United States Department of Agriculture, in pursuance of Memorandum 1275, Supplement 1, September 28, 1951, by the Secretary of Agriculture. They were based upon the assumptions, prices, and indexes of price levels adopted by the subcommittee on Benefits and Costs of the Federal Inter-Agency River Basin Committee for use at the national level (See Table 1).

The price data presented in this pamphlet were adjusted and expanded to meet South Dakota agricultural needs and conditions by the Economics and Repayment Section, Missouri-Oahe Projects Office, Bureau of Reclamation, United States Department of Interior, Huron, South Dakota, from the basic price data for South Dakota prepared by the Bureau of Agricultural Economics. These data were edited and published in this form by the Agricultural Economics Department of South Dakota State College as a part of the general exchange of information and results of research under a cooperative agreement between the Bureau of Reclamation and South Dakota State College.

In addition to price data for crops and livestock, price data for farm machinery, fertilizers, building materials, and many other miscellaneous items are also presented in this pamphlet. They were prepared using, in so far as possible, the same conversion factors that were used by the Bureau of Agricultural Economics. Included are data on the costs of major farm machine operations.

Table 1.--Projection of Employment, Income, and Prices Under High Employment Assumption 1/

Series	Unit or Base	Actual Averages 1949	Actual Averages 1950	Long-term Projection
Gross national product	Bil. dol.	255.6	279.8	300
Disposable income	do.	187.4	202.7	227
Disposable income per capita	Dol.	1,256	1,336	1,343
Population	Million	149.2	151.7	169
Labor Force	do.	63.6	64.6	72
Employment	do.	60.2	61.5	68
Unemployment	do.	3.4	3.1	4
Consumer prices	1935-39 = 100	170	172	152
Prices received by farmers	1910-14 = 100	249	256	215
Prices paid, interest, taxes and wage rates	do.	250	255	215
Parity ratio		100	100	100

1/ Based on projected conditions beginning about 1960, assuming a gradual trend toward normal conditions and world peace over the next decade. Price indexes and ratios shown above and in Table 2, except perhaps for prices of forest products, might continue to average about the same levels from 1960 forward so long as population and agricultural production continue to increase at approximately the same rates and so long as world conditions remain relatively stable.

Source: Federal Inter-Agency River Basin Committee Subcommittee on Benefits and Costs, Price Levels, August 28, 1951.

TABLE 2.-- CROP PRICES RECEIVED BY SOUTH DAKOTA FARMERS 1/

Product	Unit	1939-1944	1946	1947	1948	1949	1950	1946-1950	Projected Long Term
Corn, grain	bu.	.72	1.41	2.04	1.24	1.18	1.37	1.45	1.20
Wheat-dryland cond.	bu.	1.02	1.97	2.39	1.97	1.94	2.03	2.06	1.55
Wheat-irrigated cond.	bu.	(Price assumed lower than dryland because of quality)							1.40
Oats	bu.	.41	.72	1.01	.62	.58	.71	.73	.65
Barley	bu.	.63	1.39	1.92	1.05	1.01	1.17	1.31	1.05
Rye	bu.	.61	1.99	2.31	1.34	1.15	1.28	1.61	1.05
Grain sorghums	cwt.	1.24	2.12	2.79	1.88	2.14	1.86	2.16	1.80
Flax Seed	bu.	2.10	4.09	6.00	5.64	3.61	3.37	4.54	2.85
Soybeans	bu.	1.57	2.62	3.25	2.15	2.08	2.41	2.50	2.15
Potatoes 2/	bu.	.85	1.09	1.51	1.37	1.18	.78	1.19	.85
Alfalfa seed	bu.	15.88	23.20	19.10	26.60	24.30	30.30	24.70	19.55
Alfalfa seed	lb.	(converted from bushel prices)						.40	.32
Beans, dry edible	cwt.	(Based on average of Nebraska and Minnesota prices, BAE)						8.00	5.00
Beans, dry edible	bu.	(Converted from cwt. prices above)						4.80	3.00
Buckwheat	bu.	.60	1.43	1.79	.92	.61	.90	1.13	.95
Corn silage	ton	(Assumed 1/3 value of alfalfa hay)						5.50	4.50
Onions	50 lbs.	(Average of eight western states)						1.25	1.10
Sorghum-fodder	ton	(Based on feeding value compared to loose alfalfa hay)						9.08	7.50
Sorghum-silage	ton	(Based on feeding value compared to loose alfalfa hay)						4.12	3.40
Sugar beets 3/	ton	--	13.58	14.03	12.56	13.75	14.66	13.71	12.00
Sugar beet tops-dry	ton	(Based on feeding value compared to loose alfalfa hay)						7.91	6.55
Sugar beet tops-dry	Per ton of beets	(Based on feeding value compared to loose alfalfa hay)						1.20	1.00
Sweet clover seed	bu.	3.71	6.20	6.40	7.80	8.70	7.40	7.30	6.00

Crop Prices Received by South Dakota Farmers Continued

Product	Unit	1939-1944	1946	1947	1948	1949	1950	1946-1950	Projected Long Term
Hay-all-loose	ton	5.45	8.87	11.50	13.40	13.25	11.88	11.78	9.80
Hay-all-baled	ton	7.87 (calculated)			17.28	17.88	16.22	15.43	12.80
Hay-alfalfa-baled 4/	ton	(calculated alfalfa loose)				21.67	20.88	21.50	17.50
Hay-alfalfa-loose 4/	ton	8.12	13.68	16.20	18.62	16.98	16.50	16.50	13.50
Hay-prairie-baled 4/	ton	(calculated from native loose)				16.05	14.60	13.25	11.00
Hay-prairie-loose 4/	ton	4.58	7.80	8.30	10.40	11.30	10.20	9.60	8.00

1/ 1939-1944 averages and yearly price averages taken from South Dakota Crop and Livestock Reporting Service annual reports unless otherwise indicated. For long-time conversion factors see prices set up for river basin and flood control programs prepared by the Bureau of Agricultural Economics, November 1951.

2/ Since South Dakota potato prices are heavily weighted with certified seed the simple average prices of Nebraska, Minnesota and North Dakota as reported in Agricultural Statistics are used here for field run potatoes sacked and delivered to local markets. This projected price is below that proposed by the BAE due to location and other factors. If potatoes are stored on the farm and the cost of storage, sorting and grading are included in the farm budget as expenses, then the sale price for graded potatoes should be increased to 95 cents per bushel and unsalable potatoes fed to livestock.

3/ State PMA Office, Belle Fourche prices. This is also U. S. average.

4/ Straight averages of monthly prices.

TABLE 3.-- SEED PRICES PAID BY SOUTH DAKOTA FARMERS

Product	Unit	1939-1944	1946	1947	1948	1949	1950	1946-1950	Projected Long Term 1/
Corn-seed	bu.	$7.00	$9.50	$10.30	$12.50	$11.50	$10.80	$10.90	$9.50
Corn-seed	lb.	(calculated from bushel price)						.19	.17
Potatoes-seed	cwt.	2.38	3.25	3.65	4.60	4.50	4.20	4.04	2.87
Soybean-seed	bu.	2.88	3.70	5.00	5.20	4.10	3.55	4.31	3.85
Sugar beet seed-whole	lb.	.16	.18	.18	.20	.20	.20	.19	.17
Sugar beet seed - segmented 7/64-11/64	lb.	.39	.41	.41	--	.45	.45	.43	.38
Sugar beet seed - segmented 7/64-9/64	lb.	.70	.70	.70	.75	.75	.75	.73	.65
Sugar beet seed - segmented	Acre	(calculated from pounds required per acre)							2.50
Alfalfa seed	lb.	.33	.47	.54	.46	.63	.57	.53	.46
Alfalfa seed - improved variety	lb.	.37	.51	.57	.51	.66	.61	.57	.50
Alsike clover	lb.	.27	.42	.55	.52	.41	.47	.47	.43
Brome grass	lb.	--	.19	.28	.23	.42	.57	.34	.31
Crested wheat grass	lb.	--	.16	.28	.35	.52	.45	.35	.29
Kentucky blue grass	lb.	.26	.59	1.20	.50	.70	.81	.76	.68
Ladino clover	lb.	--	2.15	2.05	2.60	2.40	2.10	2.26	2.01
Orchard grass	lb.	--	--	--	--	--	.41	.41	.34
Red clover	lb.	.28	.44	.58	.66	.58	.57	.57	.51
Red top	lb.	.16	.22	.27	.29	.74	.76	.46	.41
Ree wheat grass	lb.	--	--	--	--	--	--	--	--
Rye grass	lb.	.11	.15	.16	.14	.18	.22	.17	.15
Sweet clover	lb.	.10	.17	.18	.20	.23	.28	.21	.19
Sudan grass	lb.	.06	.10	.12	.13	.11	.12	.12	.11
Timothy	lb.	.08	.10	.11	.10	.24	.35	.18	.16
White clover	lb.	.76	1.30	1.05	.76	1.00	1.12	1.05	.93

1/ Long-term prices are 89 percent of the 1946-50 average price except for Orchard grass which is 83 percent of 1950 prices.

TABLE 4.- FEED PRICES PAID BY SOUTH DAKOTA FARMERS

Product	Unit	1939-1944	1946	1947	1948	1949	1950	1946-1950	Projected Long Term
Bran	cwt.	1.72	2.74	3.32	3.70	3.11	3.07	3.19	2.85
Cornmeal	cwt.	1.63	3.00	3.81	3.98	2.70	2.82	3.26	2.95
Cottonseed meal	cwt.	2.62	4.09	5.22	5.43	4.75	4.66	4.83	4.30
Linseed meal	cwt.	2.61	3.86	5.12	5.08	4.52	4.46	4.61	4.15
Middlings	cwt.	1.78	2.76	3.48	3.89	3.22	3.18	3.31	2.95
Mash-laying	cwt.	2.83	4.12	4.94	5.36	4.64	4.65	4.74	4.25
Mineral mixture	cwt.	(Based on local prices - Huron)							4.25
Oyster shells 1/	cwt.	--	1.20	1.48	1.48	1.55	1.55	1.45	1.00
Soybean meal	cwt.	2.57	4.05	5.04	5.28	4.67	4.58	4.72	4.25
Sugar beet pulp-wet	ton	(Based on feeding value compared to grain and alfalfa hay)						2.67	2.50
Tankage	cwt.	3.61	5.12	6.54	6.67	6.80	6.63	6.35	5.65

1/ These figures are for only a few scattered months during each year and are not strictly comparable.

Table 5.--Slaughter Cattle Prices Received
By South Dakota Farmers
at Sioux City 1/

Class and Grade 3/	1946	1947	1948	1949	1950	1946-50 Average	Projected 2/
Steers:							
Prime: 700-900#	$20.54	$27.51	$33.58	$28.55	$31.85	$28.41	$24.72
900-1100#	21.19	28.64	34.43	29.15	32.36	29.15	25.36
1100-1300#	21.43	29.22	34.46	28.98	32.37	29.29	25.48
Choice: 700-900#	17.95	24.54	30.13	26.02	29.18	25.56	22.24
900-1100#	18.39	25.13	30.44	26.19	29.28	25.89	22.52
1100-1300#	18.76	25.57	30.41	25.98	29.10	25.96	22.59
Good and Commercial: 700-1100#	14.90	20.47	25.63	22.35	25.73	21.82	18.98
Heifers:							
Prime: 600-800#	19.66	25.91	32.11	27.10	29.98	26.95	23.45
800-1100#	20.18	26.50	32.35	27.03	29.95	27.20	23.66
Choice: 600-800#	17.23	23.27	29.08	24.96	28.00	24.51	21.32
800-1000#	17.65	23.71	29.19	24.84	27.95	24.67	21.46
Good and Commercial: 500-900#	14.04	19.02	24.56	21.57	24.82	20.80	18.10
Cows:							
Good:	14.09	17.30	22.00	17.69	21.08	18.43	16.03
Commercial:	12.09	14.90	19.72	16.30	19.64	16.53	14.38
Cutter and Canner:	9.83	12.84	17.40	14.84	18.56	14.69	12.78
Vealers:							
Good and Choice:	14.16	18.96	24.29	24.02	26.76	21.64	18.83
Commercial:	11.40	14.38	19.02	20.13	22.11	17.41	15.15
Steer Calves 500 lbs. and Under:							
Good and Choice:	16.22	20.96	26.81	25.24	29.91	23.84	20.74
Medium:	13.38	17.00	21.84	20.50	24.26	19.40	16.88
Heifer Calves 500 lbs. and Under:							
Good and Choice:	15.90	20.10	25.74	22.74	30.02	22.90	19.92
Medium:	12.90	15.99	20.96	18.52	24.61	18.60	16.18

Source: Mimeographed and printed reports of the Livestock and Meats Branch, Office of Marketing Service, U. S. D. A.

1/ Freight and handling costs Oahe to Sioux City is 52 cents per cwt. for steers, heifers and cows and 61 cents per cwt. for vealers and calves.

2/ Sioux City Projected price is 87% of 1946-50 average.

3/ The grades used in above price list are those adopted December 1950.

Table 6.--Sheep and Lamb Prices Received by South Dakota Farmers at Sioux City

	1946	1947	1948	1949	1950	1946-50 Average	Sioux City Projected 1/	Oahe Projected 2/
Spring Lambs:								
Good and Choice	18.45	23.79	27.29	23.49	27.39	24.08	21.43	20.78
Medium and Good	16.92	21.49	24.75	22.33	26.35	22.37	19.91	19.26
Lambs:								
Good and Choice	17.86	23.10	25.52	24.26	26.90	23.53	20.94	20.29
Medium and Good	16.06	20.38	23.37	23.01	25.85	21.73	19.34	18.69
Lambs (Shorn):								
Good and Choice	16.18	20.38	23.37	23.01	25.85	23.31	20.75	20.10
Medium and Good	14.80	19.87	24.72	25.50	23.82	21.74	19.35	18.70
Ewes:								
Good and Choice	7.66	8.46	10.78	10.37	12.77	10.01	9.21	8.56
Common and Medium	6.75	7.45	9.41	8.99	11.26	8.77	8.07	7.42
Feeder Lambs:								
Good and Choice	17.40	20.85	23.03	23.00	29.53	22.76	19.94 3/	19.29 3/
Medium and Good								17.69 3/

Source: Mimeographed and printed reports of the Livestock and Meats Branch, Office of Marketing Service, U. S. D. A.

1/ Sioux City Projection Index used is 89 for lambs and 92 for sheep.

2/ The Oahe projected price is obtained by subtracting 65 cents per cwt. for freight and handling from the Sioux City projected price.

3/ The price for feeder lambs is computed by taking a margin of 1.00 below the price of finished slaughter animals in same grade and class.

Table 7a--Hog Prices Received by South Dakota Farmers

	1946	1947	1948	1949	1950	1946-50 Average	Sioux City Projected 1/	Oahe Projected 2/
Barrows and Gilts:								
Good and Choice:								
180-200	17.44	25.85	24.99	19.49	19.29	21.41	17.13	16.54
200-220	17.46	26.03	25.23	19.64	19.47	21.57	17.26	16.67
220-240	17.46	26.03	25.18	19.60	19.42	21.54	17.23	16.64
Medium								
160-220	16.92	24.28	23.68	18.75	18.42	20.41	16.33	15.74
Sows								
Good and Choice								
300-330	16.56	22.82	21.00	17.07	17.50	18.99	15.19	14.60
330-360	16.56	22.68	20.75	16.75	17.25	18.80	15.04	14.45
360-400	16.54	22.45	20.34	16.26	16.83	18.48	14.78	14.19
Good								
400-450	16.52	22.16	19.84	15.72	16.31	18.11	14.49	13.90
450-550	16.47	21.81	19.34	15.11	15.62	17.67	14.14	13.55

Source: Livestock and Meats Branch, Office of Marketing Service, U. S. D. A.
1/ Projection index used is 80 of 1946-50 average.
2/ Freight and handling charges Oahe to Sioux City is 59 cents per cwt.

Table 7b--Prices Received for Livestock and Poultry Products by South Dakota Farmers

Product	1939 1944 Inc.	1946	1947	1948	1949	1950	1946-1950	Projected Price
Butterfat, per lb.	$ .36	$ .63	$ .70	$ .79	$ .61	$ .61	$ .67	$ .57
Milk, per cwt.	2.02	3.23	3.97	4.34	3.86	3.78	3.84	3.52
Chickens, per lb.	.16	.26	.21	.25	.19	.17	.22	.20
Eggs, per doz.	.24	.30	.36	.36	.36	.27	.33	.30
Turkeys, per lb.	.24	.34	.32	.44	.33	.33	.35	.32
Wool, per lb.	.35	.45	.43	.51	.47	.61	.49	.45

Source: BAE Projected Prices and Conversion Factors except for turkeys which were taken from Agricultural Statistics and projected by a conversion factor of 91.

Table 8.--Capital Investment, Inventory Value, Depreciation and Repair Cost of Farm Machinery and Equipment

Item	Projected New Cost 1/	Inventory Value 2/	Years Use 3/	Depreciation 4/	Repairs 5/
Corn Machinery					
Corn Planter, 2-row check	$174	87	15	$11.60	$ 4.35
With Fert. Attachment	215	108	15	14.33	5.38
Corn Planter, drill	114	57	15	7.60	2.85
With Fert. Attachment	158	79	15	10.53	3.95
Corn Planter, 4-row check	414	207	15	27.60	10.35
With Fert. Attachment	500	250	15	33.33	12.50
Corn Planter, drill	348	174	15	23.20	8.70
With Fert. Attachment	444	222	15	29.60	11.10
Corn Cultivator, 2-row	200	100	15	13.33	5.00
With Fert. Attachment	264	132	15	17.60	6.60
Corn Cultivator, 4-row	393	196	15	26.20	9.82
With Fert. Attachment	497	248	15	33.13	12.42
Lister Planter			15		
Lister Cultivator 2-row	160	80	15	10.66	4.00
Corn Binder 1-row, power-take-off, rubber mounted	582	291	12	48.50	14.55
Ensilage Harvestor, 1-row, with power-take-off, rubber mounted	866	433	15	57.73	21.65
With motor, rubber mounted	1310	655	15	87.77	32.75
Ensilage & Forage Blower, with pipe	347	174	15	23.13	8.68
Stalk Cutter	193	96	15	12.86	4.82
Corn Picker, 1-row pull	779	390	12	64.92	19.48
2-row pull	1120	560	12	93.33	28.00
2-row mounted	1294	647	12	107.83	32.35

Table 8 Continued

Item	Projected New Cost 1/	Inventory Value 2/	Years Use 3/	Depreciation 4/	Repairs 5/
Beet and Bean Machinery					
Beet & Bean Planter, 4-row 20" - 24" row	$314	$157	15	$20.93	$ 7.85
With Fert. Attachment	384	192	15	25.60	9.60
Beet & Bean Planter, 6-row 18" - 22" row	406	203	15	27.07	10.15
With Fert. Attachment	506	253	15	33.73	12.65
Vegetable Planter, 4-row for 1 plow tractor	142	71	15	9.47	3.55
Vegetable Cultivator, 4-row for 1 plow tractor	67	34	15	4.47	1.68
Beet & Bean Cultivator, 120" bar	122	61	15	8.13	3.05
Beet & Bean Cultivator, 136" bar	124	62	15	8.27	3.10
Bean Harvester Attachment, 2-row Cultivator	69	34	15	4.60	1.72
Bean Harvester Attachment, 4-row Cultivator	115	58	15	7.67	2.88
Beet Lifter, 1-row pull, rubber mounted	83	42	18	4.61	2.08
Beet Lifter, 2-row pull rubber mounted	154	77	18	8.56	3.85
Beet Harvester,	2,125	1,062	12	177.08	53.12
Potato Machinery					
Potato Planter, 1-row	229	114	15	21.58	5.72
With Fert. Attachment	282	142	15	18.80	7.05
Potato Planter, 2-row	392	196	15	26.13	9.80
With Fert. Attachment	500	250	15	33.33	12.50
Potato Digger, 1-row, power-take-off, rubber mounted	373	186	15	24.87	9.32
Potato Digger, 2-row, power-take-off, rubber mounted	680	340	15	58.67	17.00

Table 8 Continued

Item	Projected New Cost 1/	Inventory Value 2/	Years Use 3/	Depreciation 4/	Repairs 5/
Hay Machinery					
Mower 5' mounted	194	97	12	16.17	4.85
Mower 6' mounted	186	93	12	15.50	4.65
Mower 7' mounted	192	96	12	16.00	4.80
Mower 7' mounted with windrow	198	99	12	16.50	4.95
Dump Rake 8'	81	40	18	4.50	2.02
Dump Rake 9'	86	43	18	4.78	2.15
Dump Rake 10'	91	46	18	5.06	2.28
Dump Rake 12'	104	52	18	5.78	2.60
Side Delivery 9', rubber mounted	281	140	15	18.73	7.02
Bale Loader	281	140	15	18.73	7.02
Pickup Baler, power-take-off, twine	1166	583	12	97.17	29.15
With motor, twine	1908	954	12	159.00	47.70
With motor, wire	2036	1018	12	169.67	50.90
Field Hay Chopper	1122	561	15	74.80	28.05
Farmhand	585	292	15	39.00	14.62
Forage Fork for Farmhand	62	31	15	4.13	1.55
Plows					
Plow 2-14", rubber mounted	234	117	15	15.60	5.85
Plow 2-16", rubber mounted	237	118	15	15.80	5.92
Plow 3-14", rubber mounted	301	150	15	20.01	7.52
Plow 3-16", rubber mounted	310	155	15	20.67	7.75
Plow 4-14", rubber mounted	417	208	15	27.80	10.42
Plow 4-16", rubber mounted	422	211	15	28.13	10.55
Plow 5-14", rubber mounted	514	257	15	34.27	12.85

Table 8 Continued

Item	Projected New Cost 1/	Inventory Value 2/	Years Use 3/	Depreciation 4/	Repairs 5/
2-way Plow 1-16", rubber mounted	263	132	15	17.53	6.58
2-way Plow 2-14", rubber mounted	415	208	15	27.67	10.38
2-way Plow 2-16", rubber mounted	423	212	15	28.20	10.58
Disc Tiller, 4½ '	307	154	16	19.19	7.68
Disc Tiller, 6' - 8'	383	192	16	23.94	9.58
Disc Plow, 2 furrow	308	154	16	19.25	7.70
Disc Plow, 3 furrow	369	184	16	23.06	9.22
Rod Weeder 10'	139	70	15	9.27	3.48
Rod Weeder 12'	147	74	15	9.80	3.68
8½ Subsurface Tiller or Field Cultivator, rubber mounted	203	102	15	13.53	5.08
Harrows					
Disc 6' tandem	225	112	16	14.06	5.62
Disc 8' tandem	255	128	16	15.94	6.38
Disc 10' tandem	298	149	16	18.63	7.45
Disc 11½' single	195	98	16	12.19	4.88
Disc 15' single	241	120	16	15.06	6.02
10' Spike-tooth Harrow (5' sec)	49	25	20	2.45	1.22
15' Spike-tooth Harrow (5' sec)	74	37	20	3.70	1.85
20' Spike-tooth Harrow (5' sec)	99	50	20	4.95	2.48
25' Spike-tooth Harrow (5' sec)	123	62	20	6.15	3.08
8' Spring-tooth Harrow(4' sec)	79	40	18	4.39	1.98
9' Spring-tooth Harrow(3' sec)	82	41	18	4.56	2.05
12' Spring-tooth Harrow(3' sec)	110	55	18	6.11	2.75

Table 8 Continued

Item	Projected New Cost 1/	Inventory Value 2/	Years Use 3/	Depreciation 4/	Repairs 5/
16' Spring-tooth Harrow (4' sec)	158	79	18	8.78	3.95
18' Spring-tooth Harrow (3' sec)	164	82	18	9.11	4.10
Land Leveler 6'	251	126	16	15.69	6.28
Land Leveler 8'	290	145	16	18.13	7.25
Land Leveler 10'	328	164	16	20.50	8.20
Grain Machinery					
Drills 8' single disc, rubber mounted	380	190	15	25.33	9.50
Drills 10' single disc, rubber mounted	430	215	15	28.67	10.75
Drills 12' single disc, rubber mounted	502	251	15	33.47	12.55
Drills 8' double disc, rubber mounted	408	204	15	27.20	10.20
Drills 10' double disc, rubber mounted	465	233	15	31.00	11.62
Drills 12' double disc, rubber mounted	537	268	15	35.80	13.42
Fert. Attachment 8' drill	107	54	15	7.13	2.68
Fert. Attachment 10' drill	135	68	15	9.00	3.38
Fert. Attachment 12' drill	156	78	15	10.40	3.90
Grass Seed Attachment 8' drill	32	16	15	2.13	.80
Grass Seed Attachment 10' drill	39	20	15	2.60	.98
Grass Seed Attachment 12' drill	43	22	15	2.97	1.08
Swather 9', power-take-off, rubber mounted	487	244	15	32.47	12.18
Swather 12', power-take-off, rubber mounted	583	292	15	38.87	14.58
Swather 15'-16', power-take-off, rubber mounted	662	331	15	44.13	16.55

Table 8 Continued

Item	Projected New Cost 1/	Inventory Value 2/	Years Use 3/	Depreciation 4/	Repairs 5/
Combine 6', power-take-off, with pickup attachment	1142	571	10	114.20	28.55
Combine 6', with motor, pickup attachment	1479	740	10	147.90	36.98
Combine 12', pull pickup attachment	2724	1362	10	272.40	68.10
Combine 12', Self-propelled, pickup attachment	3900	1950	10	390.00	97.50
Grain Binder, 10', power-take-off, rubber mounted, without trucks	619	310	10	61.90	15.48
Grinders, Shellers, Elevators and Fanning Mills					
Hammer Mill 6"	97	48	15	6.47	2.42
Hammer Mill 10"	156	78	15	10.40	3.90
Hammer Mill 14"	218	109	15	14.53	5.45
Roughage Mill 10", with Knives and without Conveyor	230	115	15	15.33	5.75
Roughage Mill 10", with Knives and Conveyor	415	208	15	27.67	10.38
Roughage Mill 14", with Knives and Conveyor	530	265	15	35.33	13.25
Feed Mill 6" burr	47	24	15	3.13	1.18
Feed Mill 10" burr	72	36	15	4.80	1.80
Mill and Auger 10"	268	134	15	17.87	6.70
Corn Sheller with cleaning fan	181	91	15	12.07	4.52
Corn Sheller 200-400 bu. P. Hr.	939	470	15	62.60	23.48
Grain Elevator 32', with motor	334	167	15	22.27	8.35
Grain Elevator 36', with motor	395	198	15	26.33	9.88
Fanning Mill, 40 bu. P. Hr.	98	49	20	4.90	2.45

Table 8 Continued

Item	Projected New Cost 1/	Inventory Value 2/	Years Use 3/	Depreciation 4/	Repairs 5/
Manure Spreader, 2 wheels, rubber mounted, 110" L x 17½" D	317	158	15	21.13	7.92
Manure Spreader, 2 wheels, rubber mounted, 110" L x 27" D	408	204	15	27.20	10.20
Manure Spreader, 4 wheels, rubber mounted	374	187	15	24.93	9.35
Manure Loader	260	130	12	21.67	6.50
Running Gear, rubber mounted	180	90	18	10.00	4.50
Wagon Box, 34"	100	50	10	10.00	2.50
All Steel Grain Box	123	62	20	6.15	3.08
Dairy Equipment					
Cream Separator, 750# P. Hr., with motor	162	81	15	10.80	4.05
Cream Separator, 1000# P. Hr., with motor	175	88	15	11.67	4.38
Cream Separator, 1250# P. Hr., with motor	183	92	15	12.20	4.58
Milking Machine, 2 units, with pump	286	143	10	28.60	7.15
Milk Cooler, under 10 cows	321	160	15	21.40	8.02
Milk Cooler, 10-20 cows	363	182	15	24.20	9.08
Milk Cooler, over 20 cows	423	212	15	28.20	10.58
Water Heater, under 10 cows	120	60	20	6.00	3.00
Water Heater, 10-20 cows	149	74	20	7.45	3.72
Water Heater, over 20 cows	177	88	20	8.85	4.42
Miscellaneous Equipment					
Sprayer 20' boom	198	99	15	13.20	4.95
Sprayer 35' boom	283	142	15	18.87	7.08

Table 8 Continued

Item	Projected New Cost 1/	Inventory Value 2/	Years Use 3/	Depreciation 4/	Repairs 5/
Duster 20'	269	134	15	17.93	6.72
Siphon Tubes 1"	1		4	.25	--
Siphon Tubes 1½"	1		4	.25	--
Rubber Hoses 3"	6		6	1.00	--
Canvas Dams	9		2	4.50	--
Float (farm made)	57	28	10	5.70	1.42
Ditcher Martin 6'	173	86	20	8.65	4.32
Potato Sorter	660	330	15	44.00	16.50
Blacksmith Tools	71	36	5	14.20	1.78
Hand Implements	71	36	4	17.75	1.78
Carpentry and Misc. Tools	71	36	5	14.20	1.78
Tractors					
1-Plow Tractor	1130	565	13	86.92	28.25
2-Plow Tractor	1541	771	13	118.54	38.52
3-Plow Tractor	1924	962	13	148.00	48.10
4-Plow Tractor	2187	1094	13	168.23	54.68
5-Plow Tractor	3181	1590	13	244.69	79.52
Autos and Trucks					
Auto	1479	740	11	134.45	36.98
Truck ½ T.	1275	638	11	115.91	31.88
Truck 1 T.	1632	816	11	148.36	40.80
Truck 1½T.	1938	969	11	176.18	48.45

1/ The prices presented in Table 8 on machinery costs are largely based on two lines of farm machinery generally available in South Dakota. Insofar as possible the prices presented represent the average cost of the two makes of machinery. However, when the machines were radically different in design or

where only one machine was being offered for sale the prices presented are based on only the one line of machinery. Certain specialized equipment not available from either of the two machinery manufacturer's F.O.B. price lists was secured from other sources.

The "projected new cost" is the F.O.B. factory list price projected by the use of a conversion factor of 76 on the 1951 price list furnished by one company and 75 on the 1952 price list furnished by the other company. To these prices were added $2.25 per hundredweight for freight and 2 per cent sales tax.

2/ The inventory value of the machinery is assumed to be one-half of the projected new cost. That is to say that over a period of years the average value of the machinery on a typical farm will, as a general rule, equal one-half of the purchase price.

3/ The years of useful life of the machines are estimates. Tractor and truck life was obtained from Iowa studies reported in J. A. Hopkins and E. O. Heady, Farm Records, Iowa State College Press, Ames, 1949, p. 294.

4/ The depreciation is calculated on the straight line basis by dividing the new cost by the years of expected use. It is recognized that the rate of depreciation will depend among other things upon hours of use. In Table 9 these costs are broken down.

5/ Annual repairs were estimated to be 2½ per cent of the new cost or 5 per cent of the inventory value.

Table 9.--Hourly Costs for Operating a 1-Plow Tractor When Operated from 200 to 1000 hours annually

No. of Hours Operated Annually	Depreciation	Repair	Fuel 1/	Grease & Oil	Total Per Hour
200	.45	.12	.24	.06	.87
250	.37	.12	.24	.06	.79
300	.32	.11	.24	.06	.73
350	.28	.11	.24	.05	.68
400	.26	.10	.24	.05	.65
450	.24	.09	.24	.05	.62
500	.22	.09	.24	.04	.59
550	.21	.09	.24	.04	.58
600	.20	.09	.24	.04	.57
650	.19	.09	.24	.04	.56
700	.18	.09	.24	.04	.55
750	.17	.09	.24	.04	.54
800	.16	.09	.24	.04	.53
850	.16	.09	.24	.04	.53
900	.15	.09	.24	.04	.52
950	.15	.09	.24	.04	.52
1000	.15	.09	.24	.04	.52

1/ Fuel cost is $.18 per gal. Fuel consumption 1.33 gal. per hr.

Table 10 .---Hourly Costs for Operating a 2-Plow Tractor When Operated from 200 to 1000 Hours Annually

No. of Hours Operated Annually	Depreciation	Repair	Fuel 1/	Grease & Oil	Total Per Hour
200	.78	.14	.31	.07	1.30
250	.63	.14	.31	.07	1.15
300	.53	.13	.31	.06	1.03
350	.46	.13	.31	.06	.96
400	.41	.12	.31	.06	.90
450	.37	.12	.31	.05	.85
500	.34	.12	.31	.05	.82
550	.32	.11	.31	.05	.79
600	.30	.11	.31	.05	.77
650	.28	.11	.31	.05	.75
700	.26	.11	.31	.05	.73
750	.25	.11	.31	.05	.72
800	.24	.11	.31	.05	.71
850	.23	.11	.31	.05	.70
900	.23	.11	.31	.05	.70
950	.22	.11	.31	.05	.69
1000	.22	.11	.31	.05	.69

1/ Fuel cost is $.18 per gal. Fuel consumption 1.73 gal. per hr.

Table 11 .--Hourly Costs for Operating a 3-Plow Tractor When Operated 200 to 1000 Hours Annually

No. of Hours Operated Annually	Depreciation	Repair	Fuel 1/	Grease & Oil	Total Per Hour
200	1.10	.16	.44	.10	1.80
250	.93	.16	.44	.10	1.63
300	.79	.15	.44	.09	1.47
350	.68	.15	.44	.09	1.36
400	.60	.14	.44	.09	1.27
450	.54	.14	.44	.08	1.20
500	.49	.14	.44	.08	1.15
550	.45	.13	.44	.08	1.10
600	.42	.13	.44	.08	1.07
650	.39	.13	.44	.08	1.04
700	.37	.13	.44	.08	1.02
750	.36	.13	.44	.08	1.01
800	.36	.13	.44	.08	1.01
850	.35	.13	.44	.08	1.00
900	.34	.13	.44	.08	.99
950	.33	.13	.44	.08	.98
1000	.32	.13	.44	.08	.97

1/ Fuel cost is $.18 per gal. Fuel consumption 2.44 gal. per hour.

Table 12. -- Hourly Cost of Fuel at Various Rates per Gallon For One, Two and Three Plow Tractors 1/

Fuel Cost Per Gallon	Fuel Cost per Hour of Operation		
	One plow Tractor 2/	Two plow Tractor 3/	Three plow Tractor 4/
13	$0.17	$0.22	$0.32
14	.19	.24	.34
15	.20	.26	.37
16	.21	.28	.39
17	.23	.29	.41
18	.24	.31	.44
19	.25	.33	.46
20	.27	.35	.49
21	.28	.36	.51
22	.29	.38	.54
23	.31	.40	.56
24	.32	.42	.59
25	.33	.43	.61
26	.35	.45	.63
27	.36	.47	.66
28	.37	.48	.68
29	.39	.50	.71
30	.40	.52	.73

1/ Computed from tables 6, 7 and 8 of Nebraska Bulletin 324.
2/ Average fuel consumption 1.33 gallons per hour.
3/ Average fuel consumption 1.73 gallons per hour.
4/ Average fuel consumption 2.44 gallons per hour.

Table 13. -- Operating Cost Per Mile for 1½ Ton Trucks 1/

Miles Driven Annually	Depreciation	Repair	Gas & Oil 2/	Total
1,500	4.6	2.3	2.9	9.8
2,000	3.6	1.9	2.9	8.4
2,500	3.1	1.6	2.9	7.6
3,000	2.8	1.4	2.9	7.1
3,500	2.6	1.3	2.9	6.8
4,000	2.4	1.2	2.9	6.5
4,500	2.2	1.1	2.9	6.4
5,000	2.1	1.1	2.9	6.1
5,500	2.1	1.1	2.9	6.1
6,000	2.0	1.1	2.9	6.0
6,500	2.0	1.1	2.9	6.0
7,000	2.0	1.1	2.9	6.0
7,500	1.9	1.1	2.9	5.9
8,000	1.8	1.1	2.9	5.8
9,000	1.7	1.1	2.9	5.7
10,000	1.7	1.1	2.9	5.7
12,500	1.7	1.1	2.9	5.7
15,000	1.6	1.1	2.9	5.6
17,500	1.6	1.1	2.9	5.6
20,000	1.6	1.1	2.9	5.6

1/ Fixed costs which do not vary with mileage driven are: Insurance $65.00 per year; License $20.00 per year; Total $85.00 per year; Value of Truck $1,900.00.
2/ Cost of oil .3 cents per mile, price of gas is $.22 per gallon, average mileage 8.5 MPG.

Table 14. -- Operating Costs per Mile for 1 Ton Truck 1/

Miles Driven Annually	Depreciation	Repair	Gas & Oil 2/	Total
1,500	4.0	2.2	2.4	8.6
2,000	3.1	1.8	2.4	7.3
2,500	2.6	1.5	2.4	6.5
3,000	2.3	1.3	2.4	6.0
3,500	2.1	1.2	2.4	5.7
4,000	1.9	1.1	2.4	5.4
4,500	1.8	1.0	2.4	5.2
5,000	1.7	1.0	2.4	5.1
5,500	1.6	1.0	2.4	5.0
6,000	1.6	1.0	2.4	5.0
6,500	1.6	1.0	2.4	5.0
7,000	1.6	1.0	2.4	5.0
7,500	1.6	1.0	2.4	5.0
8,000	1.6	1.0	2.4	5.0
9,000	1.6	1.0	2.4	5.0
10,000	1.6	1.0	2.4	5.0
12,500	1.4	1.0	2.4	4.8
15,000	1.4	1.0	2.4	4.8
17,500	1.4	1.0	2.4	4.8
20,000	1.4	1.0	2.4	4.8

1/ Fixed costs which do not vary with mileage are: Insurance $65.00 per year; License $20.00 per year; Total $85.00; Value of Truck $1,600.00.
2/ Cost of oil .3 cents per mile, price of gas is $.22 per gallon.

Table 15. -- Operating Cost per Mile for ½ Ton Truck 1/

Miles Driven Annually	Depreciation	Repair	Gas & Oil 2/	Total
1,500	3.1	2.1	2.0	7.2
2,000	3.4	1.7	2.0	6.1
2,500	2.0	1.4	2.0	5.4
3,000	1.8	1.2	2.0	5.0
3,500	1.6	1.1	2.0	4.7
4,000	1.5	1.0	2.0	4.5
4,500	1.4	.9	2.0	4.3
5,000	1.3	.9	2.0	4.2
5,500	1.3	.9	2.0	4.2
6,000	1.3	.9	2.0	4.2
6,500	1.2	.9	2.0	4.1
7,000	1.2	.9	2.0	4.1
7,500	1.2	.9	2.0	4.1
8,000	1.2	.9	2.0	4.1
9,000	1.1	.9	2.0	4.0
10,000	1.1	.9	2.0	4.0
12,500	1.1	.9	2.0	4.0
15,000	1.1	.9	2.0	4.0
17,500	1.1	.9	2.0	4.0
20,000	1.1	.9	2.0	4.0

1/ Fixed costs which do not vary with mileage driven are: Insurance $55.00 per year; License $20.00 per year; Total $75.00; Value of Truck $1,250.00.

2/ Cost of oil .3 cents per mile. Price of gas $.22 per gallon. Average mileage 12.6 MPG.

Table 16. -- Operating Costs per Mile for Auto 1/

Miles Driven Annually	Depreciation	Repair	Gas & Oil 2/	Total
1,500	3.1	2.1	1.8	7.0
2,000	2.4	1.7	1.8	5.9
2,500	2.0	1.4	1.8	5.2
3,000	1.8	1.2	1.8	4.8
3,500	1.6	1.1	1.8	4.5
4,000	1.5	1.0	1.8	4.3
4,500	1.4	.9	1.8	4.1
5,000	1.3	.9	1.8	4.0
5,500	1.3	.9	1.8	4.0
6,000	1.3	.9	1.8	4.0
6,500	1.2	.9	1.8	3.9
7,000	1.2	.9	1.8	3.9
7,500	1.2	.9	1.8	3.9
8,000	1.2	.9	1.8	3.9
9,000	1.1	.9	1.8	3.8
10,000	1.1	.9	1.8	3.8
12,500	1.1	.9	1.8	3.8
15,000	1.1	.9	1.8	3.8
17,500	1.1	.9	1.8	3.8
20,000	1.1	.9	1.8	3.8

1/ Fixed costs which do not vary with mileage driven are: Insurance $50.00 per year; License $17.50 per year; Total $67.50; Value of car $1,450.00

2/ Cost of oil .3 cents per mile. Price of gas $.22 per gallon. Average Mileage 15 MPG.

Table 17. -- Fuel Costs per Mile 1/

Price per Gallon	Auto	Trucks		
		½ Ton	1 Ton	1½ Ton
.16	1.4	1.6	1.8	2.2
.17	1.4	1.6	1.9	2.3
.18	1.5	1.7	2.0	2.4
.19	1.6	1.8	2.1	2.5
.20	1.6	1.9	2.2	2.7
.21	1.7	2.0	2.3	2.8
.22	1.8	2.0	2.4	2.9
.23	1.8	2.1	2.5	3.0
.24	1.9	2.2	2.6	3.1
.25	2.0	2.3	2.7	3.2
.26	2.0	2.4	2.8	3.3
.27	2.1	2.5	2.9	3.5
.28	2.2	2.5	3.0	3.6

1/ A charge of .3 cents per mile for oil is included in this table.

Table 18. -- Estimated Auto and Truck Mileage for Farms of Different Size in Central South Dakota

Size of Farm (Acres)	Truck	Auto	
		Farm Share	Total
	Dryland Farms		
320		3,500	7,000
480	5,000	4,000	8,000
640	6,000	4,500	9,000
960	7,000	5,000	10,000
	Irrigated Farms		
Type			
Beef-Feeder	5,000	4,000	8,000
Sheep-Feeder-Cash Crop	5,000	4,000	8,000
Dairy-Cash Crop	5,000	4,000	8,000

Table 19.--Commercial Fertilizer Prices Paid Per Ton in South Dakota

Mixture	1946-50 Price Per Ton	1950 Price Per Ton	Projected Price Per Ton 1/	Proj. Price Per Cwt. of Nutrient	Proj. Price Per Cwt. of Mixture
33-0-0	$ 82.00	$ 85.00	$ 76.00	$ 11.53	$ 3.80
0-20-0	39.00	40.00	36.00	8.95	1.79
0-43-0	66.00	68.00	62.00	7.16	3.08
0-0-27	52.00	53.00	48.00	8.88	2.40
0-10-30	55.00	57.00	51.00		2.55
0-20-10	52.00	54.00	48.00		2.42
0-36-8	76.00	78.00	70.00		3.50
3-9-18	50.00	52.00	46.00		2.32
3-9-27	57.00	59.00	53.00		2.63
3-12-12	48.00	49.00	45.00		2.23
3-18-9	57.00	59.00	53.00		2.64
4-16-8	54.00	56.00	50.00		2.50
4-16-16	61.00	62.00	56.00		2.81
4-24-12	71.00	74.00	66.00		3.31
5-20-10	65.00	67.00	60.00		3.02
5-20-20	76.00	79.00	71.00		3.54
6-12-12	60.00	62.00	56.00		2.78
6-24-0	65.00	67.00	61.00		3.02
6-20-20	61.00	63.00	57.00		2.84
10-10-10	65.00	67.00	60.00		3.00
10-20-0	74.00	76.00	68.00		3.42
16-20-0	81.00	83.00	75.00		3.74

1/ Projected Price = 90% of 1950 price. Prices per ton rounded to the nearest dollar. Source of price data BAE, USDA.

Table 20.--Projected Inventory Value of Farm Buildings

Item	Projected Inventory Value 1/
Dwelling (total	3,100.00
Garage (total)	305.00
Granary (per bushel)	.15
Hog house (per sow)	30.00
Poultry house (per hen)	2.25
Chicks raised (per head)	.45
Cistern (per cu. ft.)	.45
Well (per ft. depth)	
Dug Well	6.00
Drilled Well	2.60
Root Cellar (per bu.)	.65
Trench Silo (per cu. ft.)	.08
Fences (per rod)	
Barbed Wire	.40
Woven Wire	.80
Electric	.15
Stanchion Dairy Barn (total cost)	
20 cows	1,780.00 2/
24 cows	2,080.00 2/
Dairy Loafing Shed (per head)	24.00
Milking Parlor (3 stalls)	445.00 2/
Milk House (combined with parlor)	149.00 2/
Cattle Shed (per head)	20.00
Sheep Shed (per head)	4.00

1/ The inventory value is one-half of the new projected cost. The new projected cost is 154% of the 1939-44 new price.
Depreciation is assumed to be 6 per cent of inventory value.
Repairs are assumed to be 4 per cent of inventory value.

2/ 1953 prices were indexed back to 1950 and then projected using a conversion factor of 83.

Table 21.--Rates for Contract Hand Labor on Sugar Beets in South Dakota

	1950 1/	Projected 2/
Machine Blocked or Thinned Fields		
Hoeing and finger thinning segmented seed	$10.00	$8.50
1st hoeing and weeding following finger thinning	5.50	4.68
2nd hoeing and weeding	4.00	3.40
		$16.58
Machine blocked, no finger thinning segmented seed	$ 8.00	6.80
1st hoeing and weeding, no finger thinning segmented seed	6.50	5.52
2nd hoeing and weeding	4.00	3.40
		$15.72
Fields that are not Machine blocked or thinned		
Hand blocking and finger thinning	13.00	11.05
1st hoeing and weeding following finger thinning	5.50	4.68
2nd hoeing and weeding following finger thinning	4.00	3.40
		$19.13

1/ Prevailing contract rates for 1950 at Belle Fourche, South Dakota, obtained from Production Marketing Administration 1/28/51.
2/ The Conversion Factor used was that for South Dakota wages for 1950 or 85.

Table 22.--Farm Wage Rates for South Dakota

	Average Wage 1946-50	Projected Wage
Wages - Without Room and Board		
Per Hour	$ 0.89	$ 0.80
Per Day	7.13	6.40
Per Month	137.95	125.00
Wages - With Room and Board		
Per Hour	$ 0.68	$ 0.61
Per Day	5.47	4.90
Per Month	108.20	97.00

Source: South Dakota Crop and Livestock Reporting Service Annual Reports.

Table 23.--Cost of Farm Utilities in Central South Dakota

Utilities	Monthly	Annual	Farm Share (one-half)
Electricity 1/	$10.60	$127.20	$63.60
Telephone 2/	3.45	41.40	20.70
Total annual utility cost			$84.30

1/ Source: Beadle County R.E.A. 100% of current prices.
2/ Source: Northwestern Bell Telephone Company, 84% of current prices.

Table 23.--Livestock Equipment Costs by Size of Herd or Flock

	1939-44 Prices	Projected New Cost1/	Inventory Value	Years Use	Depreciation	Repair
Dairy Equipment						
14 cows or less	$15.00	$18.75	$ 9.38	5	$3.39	$ .47
15-25 cows	20.00	25.00	12.50	5	4.52	.62
Poultry Equipment						
Less than 100 hens	20.00	25.00	12.50	4	5.80	.62
Over 100 hens	30.00	37.50	18.75	4	8.70	.94
Sheep Equipment						
30 ewes	10.00	12.50	6.25	5	2.26	.31
60 ewes	15.00	18.75	9.38	5	3.39	.47
100 ewes	20.00	25.00	12.50	5	4.52	.62
Swine Equipment						
3 or less sows	10.00	12.50	6.25	5	2.26	.31
4 or more sows	15.00	18.75	9.38	5	3.39	.47
Hay Rack	40.00	56.00 2/	28.00	10	4.45	1.40

1/ Conversion index 125
2/ Conversion index 139

Table 24.--Livestock Freight Rates and Handling Charges Per Hundred Weight from Oahe Area and Rapid City to Sioux City.

Kind of Livestock	Freight Charges Average 1946-50	Handling Charges 1951 1/	Projected Charges 2/ Freight	Handling	Total
Oahe Area to Sioux City 3/					
Feeder Calves	$0.37	$0.33	$0.33	$0.28	$0.61
Feeder Yearling Steers	0.37	0.35	0.33	0.29	0.62
Slaughter Fat Cattle	0.37	0.23	0.33	0.19	0.52
Hogs	0.37	0.31	0.33	0.26	0.59
Sheep	0.37	0.38	0.33	0.32	0.65
Rapid City to Sioux City					
Feeder Calves	$0.52	$0.33	$0.46	$0.28	$0.74
Feeder Yearling Steers	0.52	0.35	0.46	0.29	0.75
Slaughter Fat Cattle	0.52	0.23	0.46	0.19	0.65
Hogs	0.52	0.31	0.46	0.26	0.72
Sheep	0.52	0.38	0.46	0.32	0.78

1/ Handling charges include yardage, hay and commission costs at Sioux City in 1951.
2/ Conversion factors used was 89 for freight rates and 84 for handling charges.
3/ Freight rates are averages from 8 towns in the Oahe area to Sioux City, Iowa.

Table 25.--Projected Costs of Chemicals for Disease and Insect Control

Crop	Disease Insect	Chemical Used	Pounds Per Acre	Cost Per Pound of Chemical	Cost Per Acre Per Application	Number of Applications 1/	Total Cost Per Acre Per Year
Tomatoes	Blight, Anthracnose, Septoria leaf spot	Dithane 2/	2.2	$ .62	1.20	3	3.60
Potatoes	Early blight, Late blight	Dithane 2/	1.8	.62	1.00	2	2.00
Beans	Mildew, Rust, Anthracnose	Dithane 2/	1.8	.62	1.00	2	2.00
Onions	Mildew, Purple Blotch	Dithane 2/	1.8	.62	1.00	2	2.00
Corn	European corn borer	DDT 3/	1.5	per) .18	.27	2	.54
Small Grain	Diseases	Ceresan 4/	(½ oz.	bu.) .80	.03	1	.03
All Crops	Grasshoppers or	Toxophene 5/	1.2	.43	.70	1	.70
"	Leafhoppers	Chloridane 5/	.7	1.08	1.10	1	1.10
Potatoes	Potato beetle	DDT 3/	1.5	.18	.27	3	.80
Potatoes	Diseases	Mercuric chloride	--	--	1.50	1	1.50

1/ Number of applications are those generally used by commercial growers and do not necessarily represent complete control or even economically profitable control.

2/ Mix 1½ lbs. Dithane per 100 gal. water and apply every 7-10 days beginning with low dosage and increasing as plants become larger. Add DDT to control insects. If preferred 20-50 lbs. of dust may be used instead of water.

3/ Mix 1½ lbs. DDT 50 (per cent wettable) with 30 to 50 gal. water. For corn borer spray when egg masses are at peak and again in 7-10 days. Potato beetle spray every 7-10 days.

4/ 1952 price indexed to 1950 and projected by using farm supplies conversion factor. Ceresan is applied to seed.

5/ Mix to suit available equipment. Spray once or twice. Increase size of dosage as plants mature.

Note: These costs do not include application costs.

Table 26.--Weed Control Sprays Projected Costs in South Dakota

Crop Type of Weeds	Chemical Used	Rate of Application Per Acre	Cost Per Gallon	Cost Per Acre Per Application	Number of Applications	Annual Cost Per Acre
Small Grains 1/		(4# Acid per Gal.)				
Suscep. Annual	2,4-D Amine	¼# Acid	$4.38	.28	1	$ .28
Resis. Annual	"	½# Acid	4.38	.55	1 or 2	.55
Suscep. Perennial	"	½-3/4# Acid	4.38	.82	2	1.64
Resis. Perennial	"	½-1# Acid	4.38	1.10	2	2.20
Corn						
Suscep. Annuals	"	½# Acid	4.38	.28	1	.28
Yards, etc.						
Grasses	TCA 90%	(50-100#)	(.46/ lb.)	35.00	1	35.00
Roads, Ditches						
All Weeds	(Ester on 44) 2,4-D Ester	(3.34# Acid per Gal.) 1.68 #	4.59	2.30	1	2.30

1/ 2,4-D Amine may be applied as a dust to small grains but the cost per acre for the chemical is approximately doubled.

Table 27.--Miscellaneous Projected South Dakota Prices

Fuel for auto and truck 1/	.22 per gal.
Fuel for tractors and mounted engines 1/	.18 per gal.
Stock salt 2/	1.08 per cwt.
Binder twine 3/	.13 per lb.
Twine 4/	
Alfalfa Hay	.30 per ton
Straw	.41 per ton
Wire 4/	
Alfalfa Hay	.49 per ton
Straw	.65 per ton

1/ Includes state tax of .04 per gal. conversion factor 86 based on 1947 to 1950 prices.
2/ U. S. 1946-50 prices. Conversion factor 89.
3/ S. D. 1939-44 prices. Conversion factor 125.
4/ 1950 price projected using 85, 1950 conversion index for farm supplies.